

# NON-VOLATILE MEMORY DEVICE WITH ERASE ADDRESS REGISTER

## Technical Field of the Invention

[0001] This application is a divisional of United States Patent Application Serial No. 10/265,960 filed October 7, 2002, <sup>now Patent No. 6,654,289</sup> and titled, "**NON-VOLATILE MEMORY DEVICE WITH ERASE ADDRESS REGISTER**," which is a Divisional of Serial No. 09/802,612 filed March 9, 2001, <sup>now Patent No. 6,549,467</sup> and titled, "**NON-VOLATILE MEMORY DEVICE WITH ERASE ADDRESS REGISTER**," which is commonly assigned and incorporated herein by reference. The present invention relates generally to non-volatile memories and in particular the present invention relates to erase operations in a non-volatile memory device.

## Background of the Invention

[0002] Memory devices are typically provided as internal storage areas in the computer. There are several different types of memory. One type of memory is random access memory (RAM) that is typically used as main memory in a computer environment. Most RAM is volatile, which means that it requires a steady flow of electricity to maintain its contents. Computers often contain a small amount of read-only memory (ROM) that holds instructions for starting up the computer. An EEPROM (electrically erasable programmable read-only memory) is a special type non-volatile ROM that can be erased by exposing it to an electrical charge. Like other types of ROM, EEPROM is traditionally not as fast as RAM. EEPROM comprise a large number of memory cells having electrically isolated gates (floating gates). Data is stored in the memory cells in the form of charge on the floating gates. Charge is transported to or removed from the floating gates by programming and erase operations, respectively.